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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/671,465	09/29/2003	Alex S. Goldenberg	IMMR-0091B	7950

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EXAMINER

MOON, SEOKYUN

ART UNIT	PAPER NUMBER
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2629

SHORTENED STATUTORY PERIOD OF RESPONSE	MAIL DATE	DELIVERY MODE
3 MONTHS	01/16/2007	PAPER

Please find below and/or attached an Office communication concerning this application or proceeding.

If NO period for reply is specified above, the maximum statutory period will apply and will expire 6 MONTHS from the mailing date of this communication.

Office Action Summary	Application No.	Applicant(s)	
	10/671,465	GOLDENBERG ET AL.	
	Examiner	Art Unit	
	Seokyun Moon	2629	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 16 October 2006.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1,3,5-23 and 29-32 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☒ Claim(s) 1,3 and 5-23 is/are allowed.
- 6) ☒ Claim(s) 29-32 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 29 September 2003 is/are: a) ☐ accepted or b) ☒ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. _____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|--|---|
| 1) <input type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413) |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | Paper No(s)/Mail Date. _____ |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08) | 5) <input type="checkbox"/> Notice of Informal Patent Application |
| Paper No(s)/Mail Date _____ | 6) <input type="checkbox"/> Other: _____ |

DETAILED ACTION

Drawings

1. The drawings are objected to under 37 CFR 1.83(a). The drawings must show every feature of the invention specified in the claims. Therefore, the obstacle member disclosed in **claims 16 and 23**, and the sensor disclosed in **claim 18** must be shown or the feature(s) canceled from the claim(s). No new matter should be entered.

Corrected drawing sheets in compliance with 37 CFR 1.121(d) are required in reply to the Office action to avoid abandonment of the application. Any amended replacement drawing sheet should include all of the figures appearing on the immediate prior version of the sheet, even if only one figure is being amended. The figure or figure number of an amended drawing should not be labeled as "amended." If a drawing figure is to be canceled, the appropriate figure must be removed from the replacement sheet, and where necessary, the remaining figures must be renumbered and appropriate changes made to the brief description of the several views of the drawings for consistency. Additional replacement sheets may be necessary to show the renumbering of the remaining figures. Each drawing sheet submitted after the filing date of an application must be labeled in the top margin as either "Replacement Sheet" or "New Sheet" pursuant to 37 CFR 1.121(d). If the changes are not accepted by the examiner, the applicant will be notified and informed of any required corrective action in the next Office action. The objection to the drawings will not be held in abeyance.

Claim Rejections - 35 USC § 112

2. The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

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3. **Claims 31 and 32** are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

As to **claim 31**, the term "*low frequency*" renders the claim indefinite since the criteria for being classified as a low frequency, is not well defined in the claim.

As to **claim 32**, the terms "*small motor*" and "*large motor*" renders the claim indefinite since the criteria for being classified as a small motor or a large motor, is not well defined in the claim.

Appropriate correction is required.

Claim Rejections - 35 USC § 102

4. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(e) the invention was described in (1) an application for patent, published under section 122(b), by another filed in the United States before the invention by the applicant for patent or (2) a patent granted on an application for patent by another filed in the United States before the invention by the applicant for patent, except that an international application filed under the treaty defined in section 351(a) shall have the effects for purposes of this subsection of an application filed in the United States only if the international application designated the United States and was published under Article 21(2) of such treaty in the English language.

5. **Claims 30 and 31** is rejected under 35 U.S.C. 102(e) as being anticipated by Furuki (US. 6,268,671).

As to **claim 30**, Furuki teaches a method comprising:

receiving a command associated with a kinesthetic haptic effect (receiving a drive current) [col. 7 lines 6-10], the kinesthetic haptic effect being associated with kinesthetic forces (the force generated by the movement of "*vibratory assembly 17*"; and

mapping the kinesthetic haptic effect to a vibrotactile haptic effect, the vibrotactile haptic effect associated with vibrotactile forces (the vibration caused by the collision between "*protrusion 14b*" and "*protruding end 11a*") to be output to a vibrotactile interface device,

wherein the kinesthetic haptic effect is a spring effect (the "*coil spring 15*" is compressed or expanded as the "*vibratory assembly 17*" moves toward or away from the "*columnar plunger 11*") [figs. 8 and 9], the vibrotactile haptic effect is output as a vibration if the spring effect has a magnitude above a predetermined threshold (only when the magnitude of the force generated by the effect is greater than the friction force caused by the spring constant of the "*coil spring 15*", the "*coil spring 15*" is compressed, and thus the vibrotactile haptic effect is output).

As to **claim 31**, Furuki teaches a method comprising:

receiving a command associated with a kinesthetic haptic effect (receiving a drive current) [col. 7 lines 6-10], the kinesthetic haptic effect being associated with kinesthetic forces (the force generated by the movement of "*vibratory assembly 17*"); and

mapping the kinesthetic haptic effect to a vibrotactile haptic effect, the vibrotactile haptic effect associated with vibrotactile forces (the vibration caused by the collision between "*protrusion 14b*" and "*protruding end 11a*") [figs. 8 and 9] to be output to a vibrotactile interface device,

wherein the kinesthetic haptic effect is a damper effect (the shock is occurred as the "*protrusion 14b*" absorbs the impact caused by the collision with "*protruding end 11a*"), the vibrotactile haptic effect is output as a vibration having a frequency [col. 7 lines 58-65].

Claim Rejections - 35 USC § 103

6. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

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(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

7. **Claims 29 and 32** are rejected under 35 U.S.C. 103(a) as being unpatentable over Furuki.

Furuki teaches a method comprising:

receiving a command associated with a kinesthetic haptic effect (receiving a drive current) [col. 7 lines 6-10], the kinesthetic haptic effect being associated with kinesthetic forces (the force generated by the movement of "*vibratory assembly 17*"); and

mapping the kinesthetic haptic effect to a vibrotactile haptic effect, the vibrotactile haptic effect associated with vibrotactile forces (the vibration caused by the collision between "*protrusion 14b*" and "*protruding end 11a*") to be output to a vibrotactile interface device,

wherein the kinesthetic haptic effect is a periodic effect [fig. 4], the vibrotactile haptic effect having its own magnitude, the magnitude of the vibrotactile haptic effect being based on a magnitude of the kinesthetic haptic effect (as the number of the collisions caused by the movement of the "*vibratory assembly 17*" increases, the magnitude of the vibration caused by the collision increases).

Furuki does not teach that the kinesthetic haptic effect is a non-period effect or a vector force effect.

However, as Examiner acknowledges that specifying the haptic effect to be a non-periodic effect or a vector force effect is not a required design factor [Appl. pg 3 lines 5-10], but is one option out of many design factors, it is obvious matter of design choice to specify the haptic effect to be a non-periodic effect or a vector force effect [Appl. par. (0069)].

Therefore, it would have been obvious to one of ordinary skill in the art at the time of the invention to use one of a periodic effect, a non-period effect or a vector force effect for the

haptic effect, since any one of the effects would perform equally well at providing vibration to the device user.

Allowable Subject Matter

8. **Claims 1, 3, and 5-23** are allowed.

Conclusion

9. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Seokyun Moon whose telephone number is (571) 272-5552. The examiner can normally be reached on Mon - Fri (8:30 a.m. - 5:00 p.m.).

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Amr Awad can be reached on (571) 272-7764. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

January 3, 2007

S.M.

AMR A. AWAD
SUPERVISORY PATENT EXAMINER

